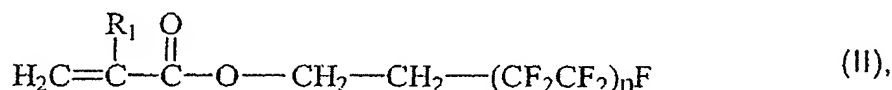


# Claims

1. Coating composition for producing formable scratchproof coatings with dirt repellency effect, comprising
  - A) from 1 to 30% by weight of a prepolymer obtainable by free-radically polymerizing a mixture comprising
    - A1) from 1 to 10 parts by weight of at least one sulphur compound containing at least 3 thiol groups and
    - A2) from 90 to 99 parts by weight of alkyl (meth)acrylates,
  - B) from 0.2 to 10% by weight of fluoroalkyl (meth)acrylate according to the formula (II)



wherein the radical R<sub>1</sub> is a hydrogen atom or a methyl radical and n is an integer in the range from 2 to 10

- C) from 20 to 80% by weight of polyfunctional (meth)acrylates,
- D) from 0.01 to 10% by weight of at least one initiator,
- E) from 2 to 75% by weight of at least one diluent and
- F) from 0 to 40% by weight of customary additives.

2. Coating composition according to Claim 1, characterized in that the prepolymer A) has a viscosity number to DIN ISO 1628-6 in the range from 8 to 15 ml/g measured in CHCl<sub>3</sub> at 20°C.

3. Coating composition according to Claim 1 or 2,  
characterized in that the alkyl (meth)acrylates  
used to prepare the prepolymer A) have 1 to 8  
5 carbon atoms in the alcohol residue.
4. Coating composition according to Claim 3,  
characterized in that the prepolymer A) is pre-  
pared using a mixture of alkyl (meth)acrylates A2)  
10 containing at least 10% by weight of methyl  
(meth)methacrylate and/or ethyl (meth)acrylate and  
at least 2% by weight of alkyl (meth)acrylates  
having 3 to 8 carbon atoms.
- 15 5. Coating composition according to one of the pre-  
ceding claims, characterized in that the sulphur  
compound contains at least four thiol groups.
- 20 6. Coating composition according to Claim 5, charac-  
terized in that the sulphur compound is  
pentaerythritol tetrathioglycolate.
- 25 7. Coating composition according to one of the  
preceding claims, characterized in that the  
coating composition contains from 0.5 to 2% by  
weight of fluoroalkyl (meth)acrylates in accor-  
dance with component B).
- 30 8. Coating composition according to one of the  
preceding claims, characterized in that the  
initiator in accordance with component D) is a UV  
initiator.
- 35 9. Coating composition according to one of the  
preceding claims, characterized in that the

diluent in accordance with component E) comprises  
(meth)acrylates having 1 to 10 carbon atoms,  
styrenes and/or acrylonitrile.

- 5    10. Coating composition according to one of the  
preceding claims, characterized in that component  
F) comprises UV absorbers and/or UV stabilizers.
- 10    11. Scratchproof formable dirt-repellent moulding  
comprising a polymeric substrate and a scratch-  
proof coating obtainable by a coating composition  
according to one of Claims 1 to 10.
- 15    12. Moulding according to Claim 11, characterized in  
that the polymeric substrate comprises polymethyl  
methacrylate, polycarbonate, polyvinyl chloride,  
polystyrene, polyolefins, cycloolefin copolymers,  
polyesters and/or acrylonitrile/butadiene/styrene  
copolymers.
- 20    13. Moulding according to Claim 11 or 12, charac-  
terized in that the moulding has an impact  
strength to ISO 179/1 of at least 10 kJ/m<sup>2</sup>.
- 25    14. Moulding according to one of Claims 11 to 13,  
characterized in that the polymeric substrate has  
a thickness in the range from 1 mm to 200 mm.
- 30    15. Moulding according to one of Claims 11 to 14,  
characterized in that the scratchproof coating has  
a coat thickness in the range from 1 to 50 µm.
- 35    16. Moulding according to one of Claims 11 to 15,  
characterized in that the haze of the moulding  
increases by not more than 5% after a scratch

resistance test to DIN 52 347.

17. Moulding according to one of Claims 11 to 16,  
characterized in that the polymeric substrate has  
5 an elasticity modulus to ISO 527-2 of at least  
1500 MPa.
18. Moulding according to one of Claims 11 to 17,  
characterized in that the moulding has a  
10 weathering stability to DIN 53 387 of at least  
4000 hours.
19. Moulding according to one of Claims 11 to 18,  
characterized in that the moulding has a trans-  
15 parency to DIN 5033 of at least 70%.
20. Moulding according to one of Claims 11 to 19,  
characterized in that the contact angle of alpha-  
bromonaphthalene with the surface of the polymeric  
20 article at 20°C is at least 50°.
21. Process for producing scratchproof formable dirt-  
repellent mouldings according to one of Claims 11  
to 20, characterized in that a coating composition  
25 according to one of Claims 1 to 10 is applied to a  
polymeric substrate and cured.